

ABSTRACT OF THE DISCLOSURE

Conventionally, a particle/defect inspection apparatus outputs a total number of detected particles/defects as the result of detection. For taking countermeasures to failures in manufacturing processes, the particles/defects detected by the inspection apparatus are analyzed. Since the inspection apparatus outputs a large number of detected particles/defects, an immense time is required for analyzing the detected particles/defects, resulting in a delay in taking countermeasures to a failure in the manufacturing processes. In the present invention, an apparatus for optically inspecting particles or defects relates a particle or defect size to a cause of failure in an inspection result. A data processing circuit points out a cause of failure from the statistics on the inspection result, and displays information on the inspection result. A failure analysis is conducted by setting a threshold for identifying a failure in each of regions on a semiconductor device or the like to statistically evaluate detected particles.